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Illumina

## ADDRESS IDENTIFICATION APPARATUS

### AIM

5 To provide easy to read lit numbers and letters using electroluminescent (EL) lites.

### FUNCTION/PURPOSE

10 Illumina e lites are electroluminescent (EL) equipped numbers and letters that enhance the ability to locate addresses and street names. Illumina e lites definitely will assist emergency medical technicians (EMT's), firefighters, law enforcers, delivery personnel and the general public by providing better visual illumination of addresses, street names and traffic signs in foggy and hazy weather, 15 in dark and unlit areas.

### DESCRIPTION(S)

### FIELD OF THE INVENTION

20 [0001] This invention relates to devices for providing illuminated address information at buildings.

### BACKGROUND

25 [0002] A need exists for easy to read numbers and letters on building structures. Better visual illumination would be helpful for addresses, street names, and signs in foggy and hazy weather, and in dark and unlit areas. In emergency situations, improved signs would make it easier for Emergency Medical Technicians (EMT's), firefighters, law enforcers, and the like to find and read addresses, 30 thereby saving valuable time and eventually saving lives. Further,

such signs would be helpful friends and relatives when coming to visit, or for delivery personnel, so they can avoid carrying a flashlight or shining headlights at a house or knocking at doors asking for the right address. Thus, there remains a need for an 5 improved address identification apparatus.

SUMMARY

[0003] To provide illuminated address signs for buildings, a plurality of electrically powered, electroluminescent, interlocking 10 translucent display panels are provided. Each of the display panels has a light source therein and an identification symbol thereon, and the identification symbol is illuminated by the light source. The translucent display panels further include a male interlocking connector portion and a female interlocking connector portion. The 15 interlocking connector portions in adjacent display panels of the plurality of translucent display panels are configured for detachable interfitting mating engagement. The male and female interlocking connector portions include electrical connections for supply of electrical power to the light source within each of the display 20 panels. A desired sequence of numbers and or letters may be interlocked to provide the desired building address, and the necessary electrical connections are inherently provided by and through the structure of each panel. Low voltage electrical power is easily supplied at an end panel.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF DRAWING

[0004] The present invention will be described by way of exemplary embodiments, illustrated in the accompanying drawing in which like references denote similar elements, and in which:

5 [0005] FIG. 1 illustrates a plan view of an illuminated building number, showing the details for construction, including electrical connections.

10 [0006] FIG. 2 illustrates a plan view of an illuminated building number, showing the details for construction, including electrical connections.

[0007] FIG. 3 illustrates a plan view of an illuminated building letter, showing the details for construction, including electrical connections.

15 [0008] FIG. 4 illustrates a plan view of an illuminated building letter, showing the details for construction, including electrical connections.

[0009] FIG. 5 illustrates a perspective view of several illuminated building numbers being joined, together with a power supply.

20 [0010] FIG. 6 provides a plan view for a receiving groove located in an illuminated alphanumeric display panel.

[0011] FIG. 7 provides a sectional view for a receiving groove located in an illuminated alphanumeric display panel.

25 [0012] FIG. 8 provides a plan view for a tongue for an illuminated alphanumeric display panel.

[0013] FIG. 9 provides a diagrammatic view of the interconnecting wiring between a combination light sensor and female power adaptor, and an electrical power supply unit.

5 [0014] FIG. 10 provides a view of a female electrical power adapter.

[0015] FIG. 11 is a plan view for a female electrical power adapter.

[0016] FIG. 12 is a sectional view of a female power adapter.

[0017] FIG. 13 provides a plan view for a male power adapter.

10 [0018] The foregoing figures, being merely exemplary, contain various elements that may be present or omitted from actual embodiments which may be implemented for a suitable building address illumination system.

15 **DETAILED DESCRIPTION**

[0019] A design is disclosed for providing easy to read illuminated numbers and letters. In one embodiment, electroluminescent (EL) lights are utilized. Such electroluminescent equipped numbers and letters enhance the ability to locate addresses and street names. Such lights will assist emergency medical technicians (EMT's), firefighters, law enforcers, delivery personnel and the general public by providing better visual illumination of addresses, street names and traffic signs in foggy and hazy weather, especially in dark and unlit areas.

20 [0020] In one embodiment, the apparatus provides a plurality of translucent display panels. Each of the display panels has a

light source therein and an identification symbol thereon, and the identification symbol is illuminated by the light source. The translucent display panels further include a male interlocking connector portion and a female interlocking connector portion. The 5 interlocking connector portions in adjacent display panels of the plurality of translucent display panels are configured for detachable interfitting mating engagement. The male and female interlocking connector portions include electrical connections for supply of electrical power to the light source within each of the display 10 panels.

[0021] An electrical power supply unit may be provided. The power supply unit may be configured to supply a desired voltage electrical power supply to the plurality of translucent display panels. A power adaptor, configured for interlocking engagement with 15 one of the interlocking connector portions on one of the translucent display panels, may be provided. The power adapter is configured for transmitting electrical power from the electrical power supply unit to one of the interlocking connector portions. The electrical power supply may include a transformer. In one embodiment, the transformer 20 supplies power at approximately 9 volts.

[0022] For attachment to a building, the display panels may include one or more apertures defined by interior edge wall portions.

[0023] In one embodiment, the illuminated display panels include first and second sidewall portions, and the interlocking 25 connector portions are configured as complementary receptacle grooves and protruding plugs. In one embodiment, receptacle grooves are

provided in a first sidewall, and plugs are provided protruding from a second sidewall. In such designs, the adjacent display panels may be secured in interfitting mating engagement by complementary tongue and groove features in adjacent first and second sidewalls of 5 adjacent display panels.

[0024] It may be desirable, especially for emergency use, to provide display panels with multi-level light sources, wherein the multi-level light sources are configured for operation in a normal, low intensity lighting mode, and an emergency, high intensity 10 lighting mode. Also, the emergency lighting may include flashing of the lit panels.

[0025] Further, to provide illumination in dark conditions, it may be useful to provide an ambient light photo sensor and a controller, wherein the ambient light sensor is adapted to sense low 15 light conditions and to act, through the controller, to turn on said light sources in a plurality of display panels. As described herein, the display panels may be provided in translucent display panels having electroluminescent identification symbols. Such symbols may include letters, or numbers, or any combination thereof.

20 [0026] In one version, the building identification panels may be provided in the following configuration:

Version 1:

Power supply-9V DC

Numbers 0 to 9 and Letters A to Z

25 Weather resistant

Easy installation

Optional photo sensor-dusk to dawn

Optional flasher for 911 responses

[0027] In another version, the building identification panels may be provided in the following configuration:

5 Version 2:

Power supply-solar power

Numbers 0 to 9 and Letters A to Z

Weather resistant

Easy installation

10 Optional photo sensor-dusk to dawn

Optional flasher for 911 responses

[0028] The described building illumination system provides better visual illumination at night compared to other illumination designs. In cases of emergency situations, the display panels described herein makes it easier for EMT's, firefighters, law enforcers and the like to find and read addresses, thereby saving valuable time and eventually, saving lives. Further, the optional phone hook-up to 911 enhances the ability of responders to find the address. In such a configuration, the home address flashes when 911 is dialed from home phone, alerting emergency personnel that "this is the house."

[0029] The design provides display panels that are pleasing to the eye, with uniform lighting. The display panels easily connect with each other, so that number and letters can be easily assembled into the desired address. The design is durable, with weather resistant construction. Also, the display panels may be made

available in different colors. In one embodiment, the basic sizes for numbers are 4 inches in height. In another embodiment, letters that are 2 inches in height may be provided for residential use. Also, letters and numbers in 12 inches and 10 inches in height can be 5 provided for commercial use. The width of the display panels may vary for numbers and letters.

[0030] Our goal is to be able to provide emergency medical technicians, firefighters, and law enforcement personnel with better visual illumination of building addresses, especially in dark 10 conditions.

Advantages:

Better visual illumination at night, unlit areas, hazy and foggy 15 weather. In cases of emergency situations, it makes it easier for EMT's, firefighters, law enforcers and the like to find and read addresses, thereby saving valuable time and eventual saving lives. Optional phone hook up to 911 response. Home address flashes when 911 20 is dialed from home phone, alerting emergency personnel that, "this is the house." Even helpful for delivery personnel, friends and relatives coming to visit, they don't need to carry a flashlight with them or shine their car headlights at the house or knocking at every door asking for the right address.

—  
25 Does not emit heat (low operating temperature)  
Cool to touch  
Optional photo sensor to switch on at dusk and switches off at dawn  
Pleasing to the eye (not glaring)  
Energy efficient (low power consumption), low operating cost  
30 Uniform lighting

Easily connects with each other (you can change numbers and letters individually)

Durable and weather resistant construction

Adds beauty to homes and business establishments

5 Comes in different colors

Basic sizes for the numbers are 4 inches in height, letters are 2 inches in height for residential use and 12 inches and 10 inches respectively, for commercial use. However, we can meet sizes based on specifications by homeowner(s) and/or builders and State and/or

10 Federal specifications for street signs and road signs. Width may vary for numbers and letters.

Who Would Use the System?

Homeowners, home and commercial builders, businesses and government  
15 establishments.

Who Benefits With the Use of the System?

Emergency personnel, law enforcers, firefighters, homeowners,  
business establishment personnel, delivery people, friends, relatives  
20 and just about anyone.

Goal:

Our goal is to be able to assist the emergency medical technicians,  
firefighters, law enforcers during emergencies with better visual  
25 illumination of addresses and the general public during foggy and  
hazy conditions and in dark and unlit areas.

**ABSTRACT:**

Illuminated building address signs. A letter and number display panel system having a plurality of translucent display panels is provided. An electrical supply unit may be provided, with a power adaptor as necessary. In one embodiment, an ambient light photo sensor and controller switches the unit on at the onset of darkness. The display panels contain a multi-level light source and an identification symbol which is illuminated by the multi-level light source. The translucent display panels contain electro luminescent identification symbols of numbers and letters. The display panel system may include controller operation for display mode wherein the display panels are powered in a flashing configuration for emergency purposes.

15



FIG. 1

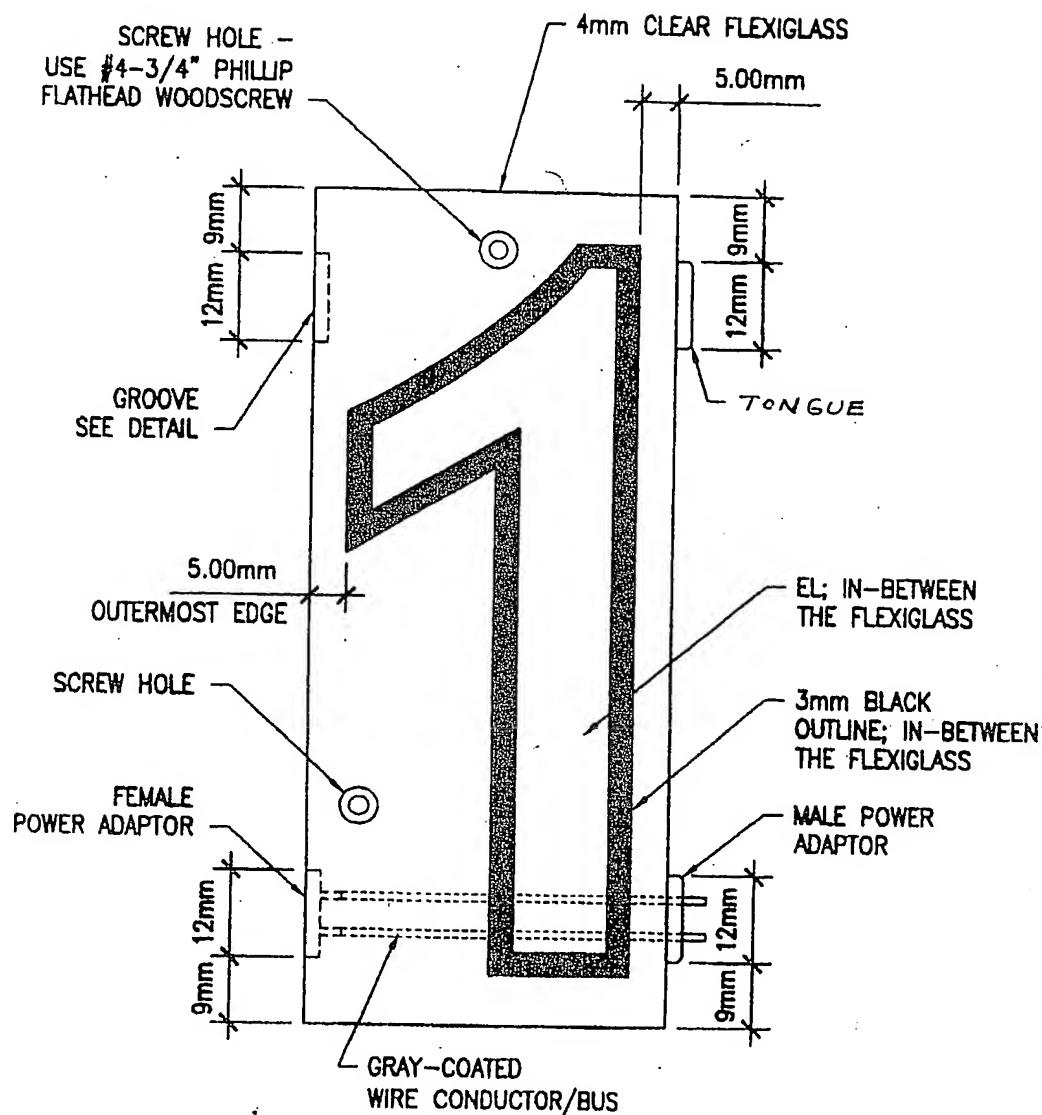


FIG. 2

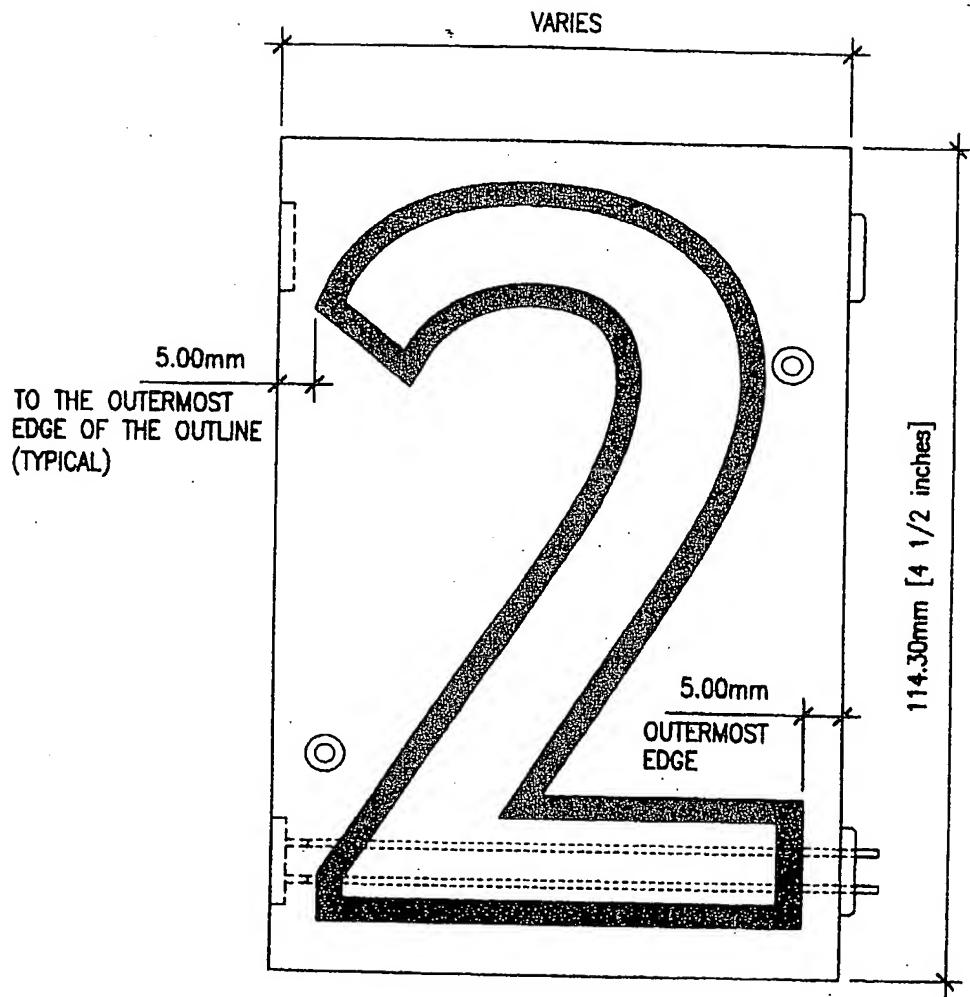


FIG. 3

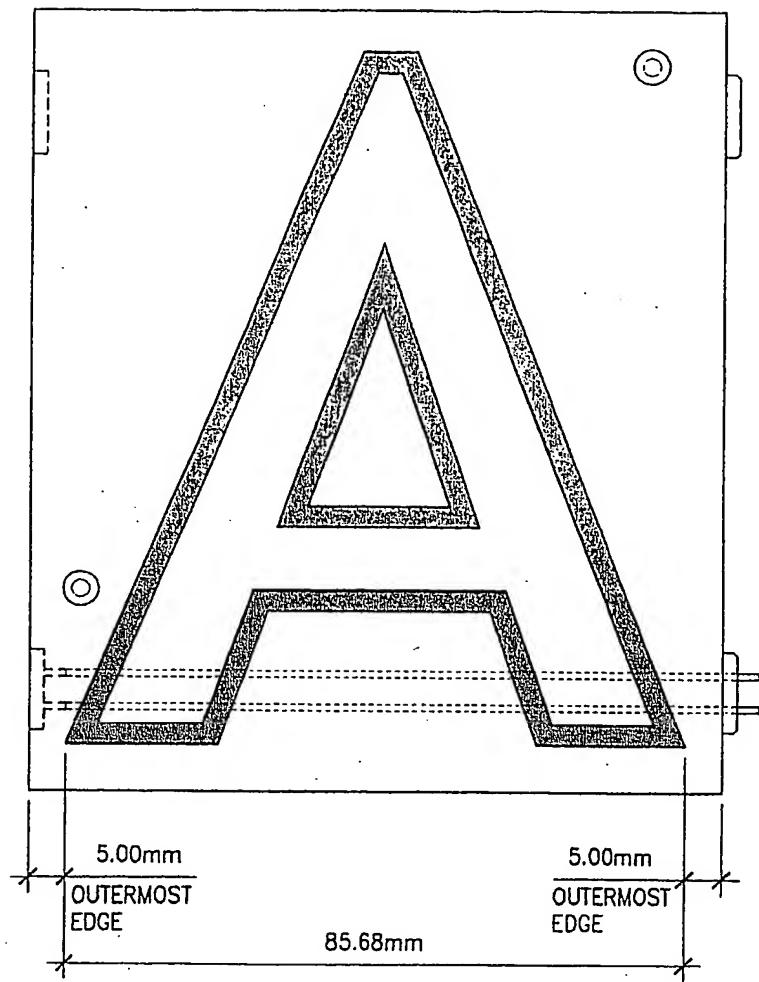


FIG. 4

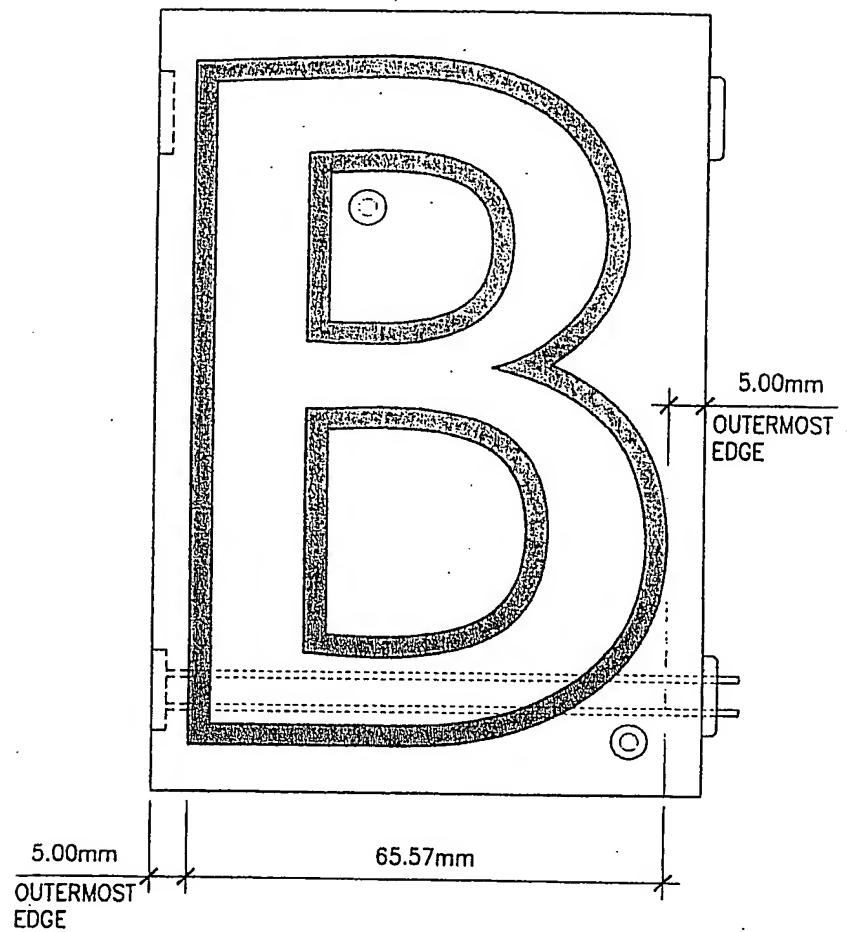
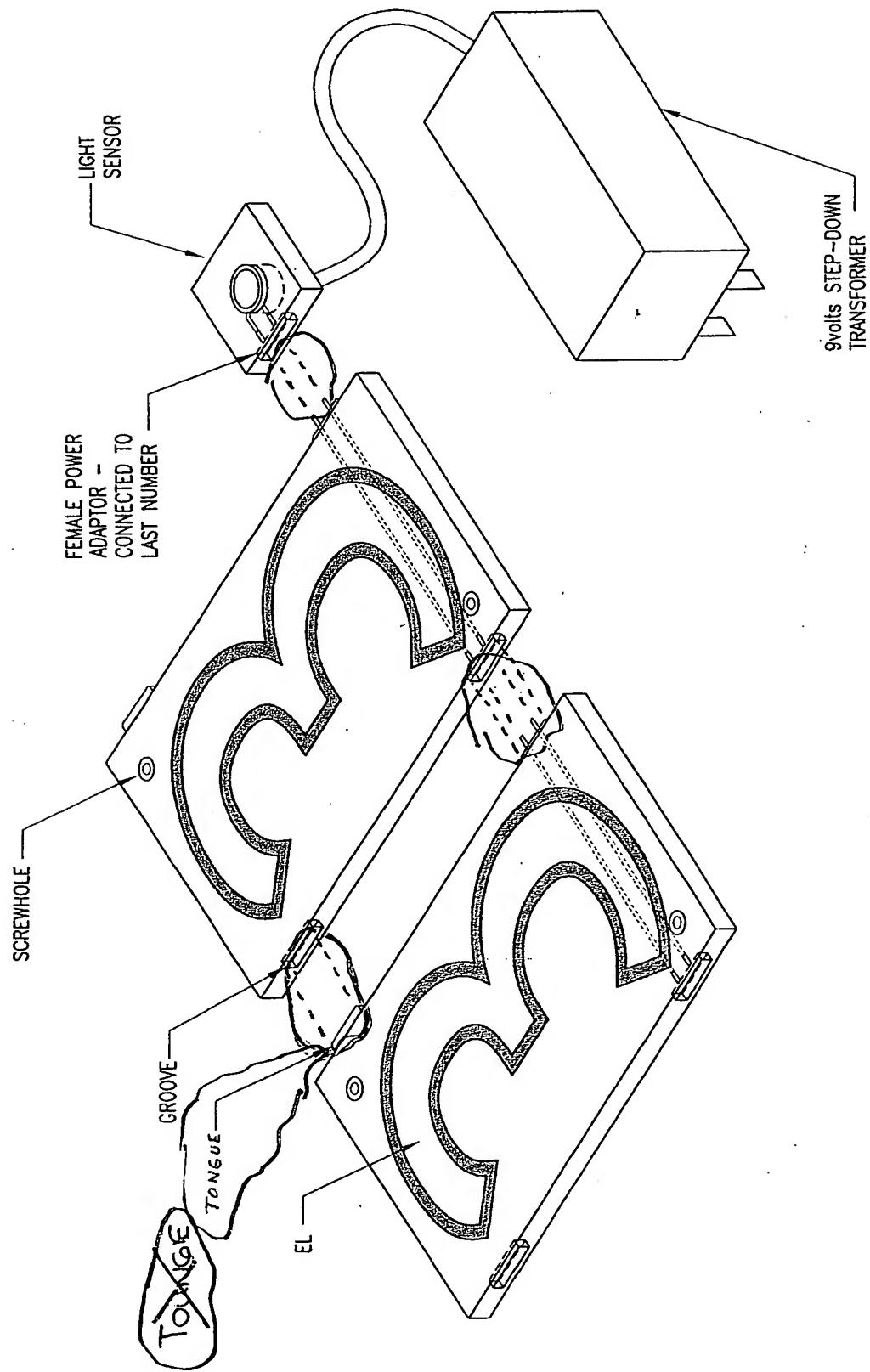


FIG. 5



*SCHEMATIC DIAGRAM*

FIG. 6

GROOVE  
PLAN VIEW

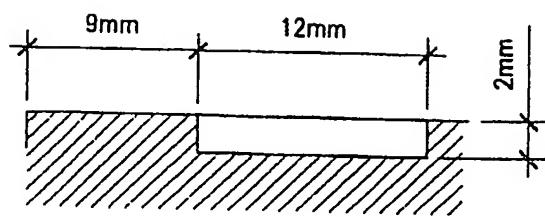


FIG. 7

SECTIONAL  
VIEW

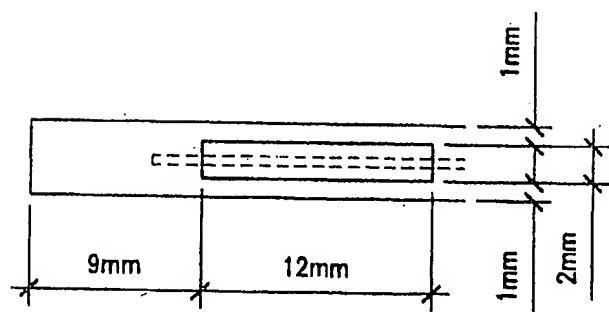
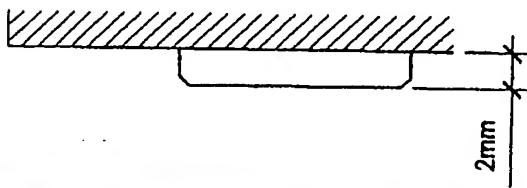


FIG. 8

TONGUE  
PLAN VIEW



~~TONGUE & GROOVE~~

FIG. 9

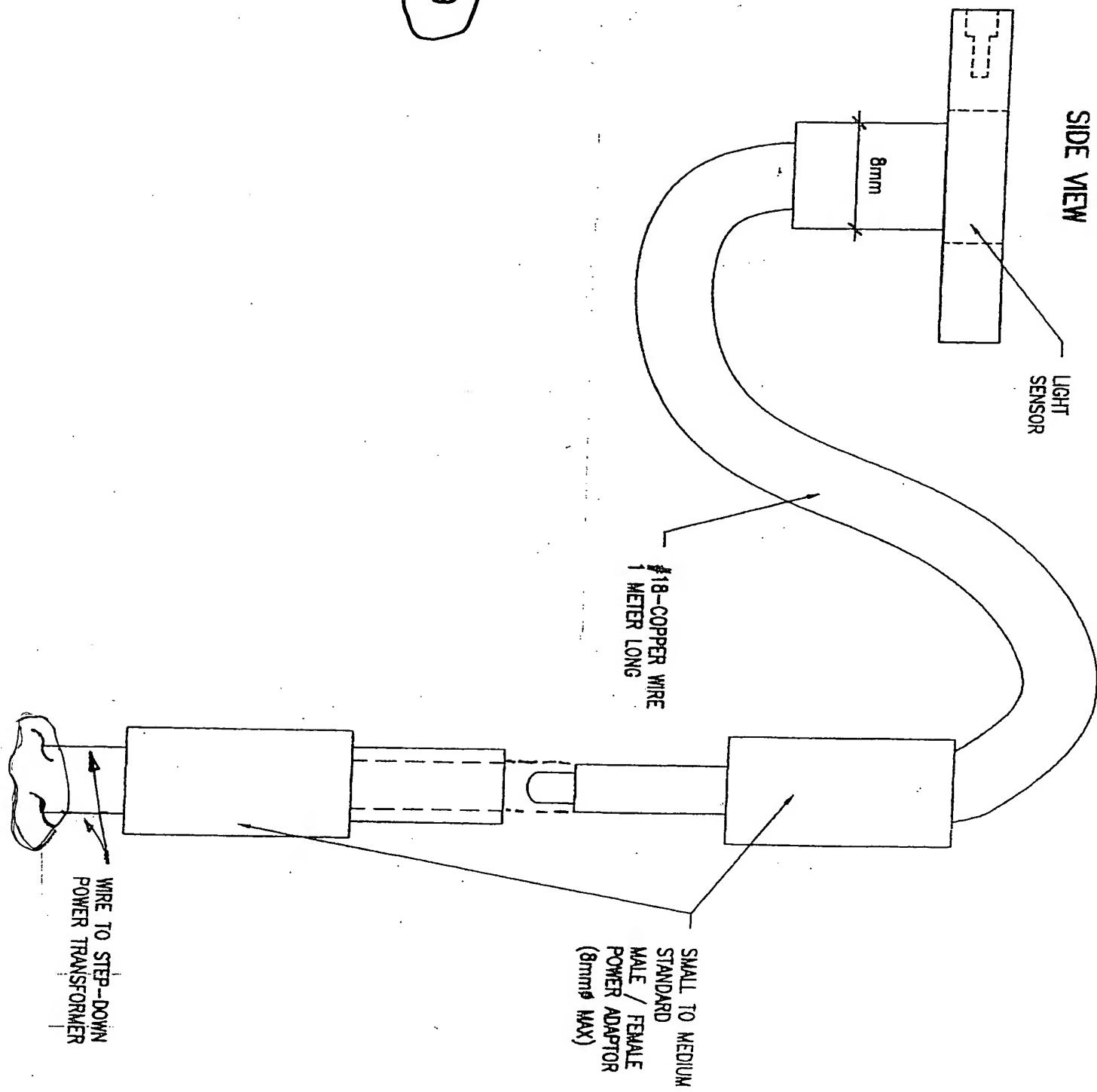


FIG. 10

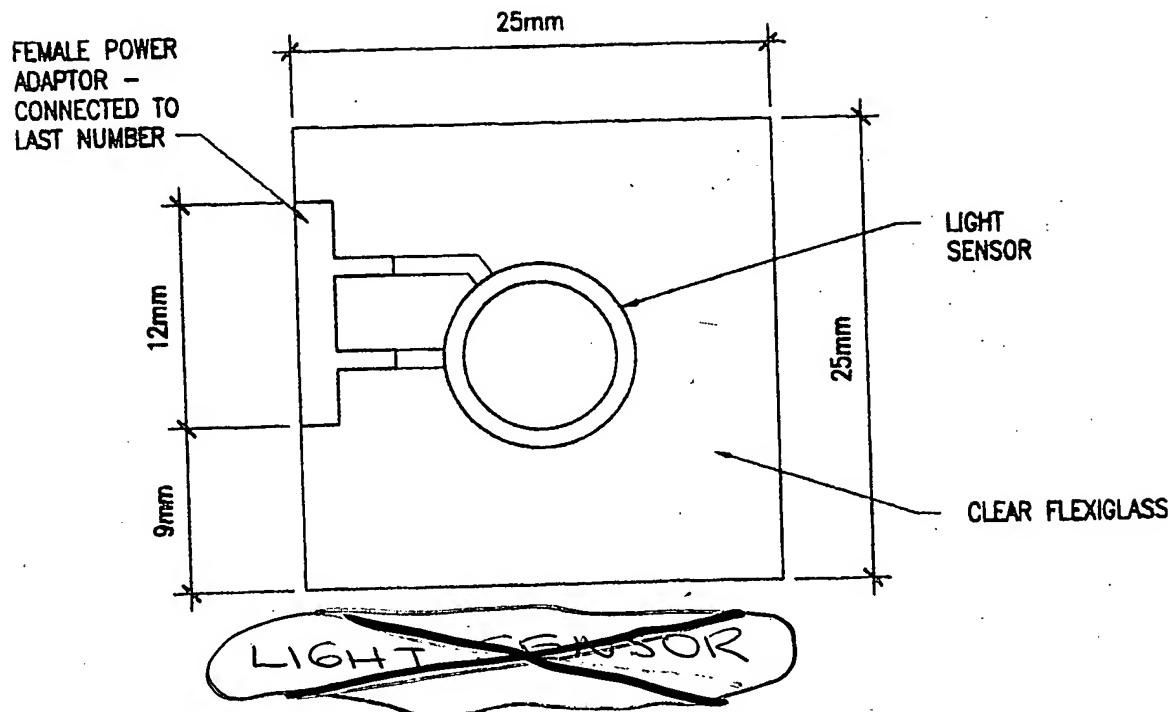


FIG. 11

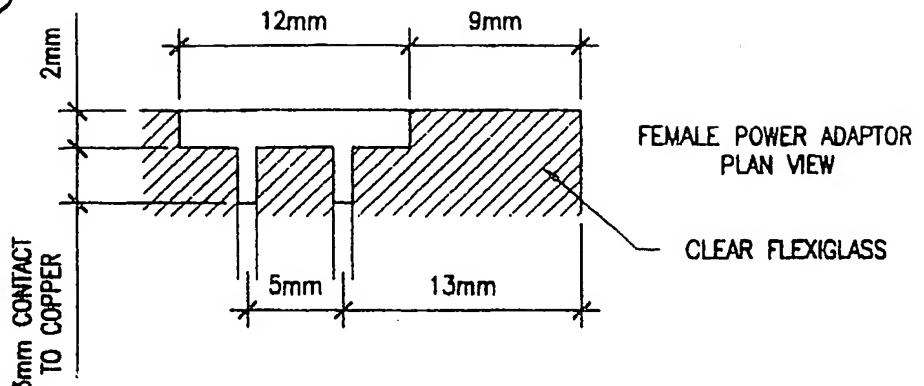


FIG. 12

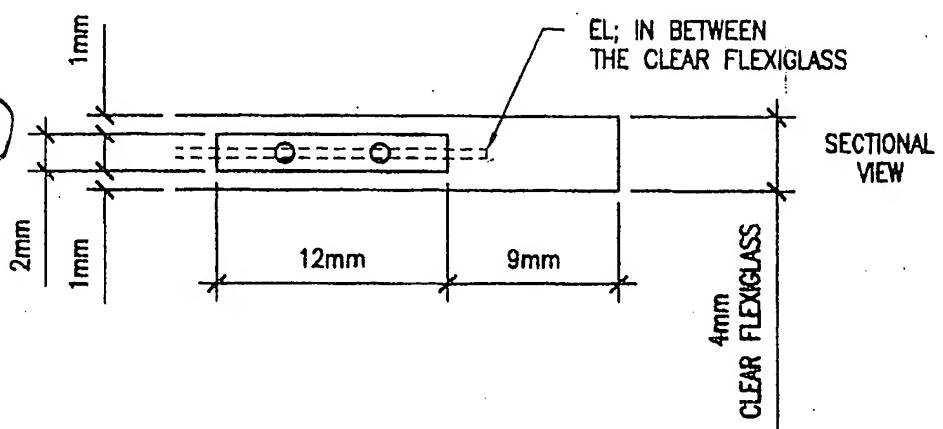


FIG. 13

